DAS 27

9-89

0.00

120

QC

120

Quality Control

QC8- Inspect parts - second check

Memo

			·~·
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE	

								•		QA Closed:	Date:	
Work Orde	ır.				DISPOSITION				AGAINST DEI	PARTMENT/	PROCESS	
Part N	0				Rework Scrap Use-as-is		I Thern	Skid-tube Machining noforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	lo				Work Order Update			Large Fab	Composite		Supplier	· L
Root				Descr	ription of work order update	In	itial	Ad	ction	Sign &	-	
Cause	Date	Step	Qty		or Non-conformance	Chi	ef Eng	Desc	cription	Date	Verification	QC Inspector
oc/Data												
quip/Tooling												
perator		•						}				
/laterial												
etup												
Other												
rocess	_											
Supplier											ŗ	
raining	_											
Inapproved			1	<u> </u>		<u> </u>						
				·-···		AULT	CATE	GORY				
Landir 1	ng Gear			_	General	· .	<u> </u>			1	Г	7
}	Bendin	•		. 1	Bend	\vdash	Grain			Ovalized	., <u> </u>	Pressure/Forced Temperature/Cure
		Not Conce	ntric to	O/S -	BOM/Route		Hardwa 		ļ	Over/Under	<u></u>	Weld
	Cracks			-	Broken/Damaged		•	ion Incomplete	///	Part Incorred	⊢	Wrong Stock Pulled
		d/Crimped	-	-	Burrs	—		ions Incomplete	Junciear	Part Lost/Mi Part Moved	issing L	
}	Cuffs			-	Contamination	-		enance	<u> </u>	Positioned V	Mrana	
	Heat Tr		. T la	-	Countersink	\vdash	Mislabe			Positioned v	_	Other
-		ion Strip in	eauir	\vdash	Cut Too Short Drill Holes	\vdash	Misread Offset	ı	<u> </u>	Jrowei Loss/	Juige	Totalei
}		in Bend	Fyteria: -	_ -				Calibration				
}		Waves in		" -	Drawing Finish	\vdash		Sequence				
}		Sequence wist in Tu		- -	Folio	\vdash		e Dimensions			· · · · · · · · · · · · · · · · · · ·	
	wave/ i	MI2FILL III	ne	1	ורטווט	. 1 _ 1'	Outside	DIMENSIONS				

__Date: ____

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

May 1, 2013 7:16:43 AM

Item ID:

D2012-113

Accept

N900040100

Setup Start

Revision ID:

Start Date:

Item Name: Clamp

Required Date: 5/10/13

4/30/13

Start Qty: 5.00 Reg'd Oty: 5.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

OC:

Date:

SPC (Y/N):

Date:

Stop

Sequence tin Work Center W

Deersti in Description

Set iln/ Run Lours

Tool # Plan Code

Reject -Accept .Qty Qty.

Reject - Insp. Number Stamp

130

130

Small Fab

Small Fab

Small Fab

0.00

0.00

1- Deburr any rough edges

2- Bend as per Dwg D2012-113 using DT8458

3- Tumble _____

Memo

Memo

Memo

140

140

OC

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

0.00

(3) 13-10-01

150

150 Packaging Packaging

Identify as per dwg & Stock Location: 57063

0.00

0.00

						•					DQA:	Date:	
NCR: Y	es .	/ No				WORK ORDER NON-	-co	NFORM	MANCE / UP	DATE	QA Closed:	Date:	
Work Orde	r.			e e e e		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	 lo.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root Cause		Date	Step	Qty	Des	otion of work order update or Non-conformance	1	Initial hief Eng		tion ription	Sign & Date	Verification	QC Inspector
oc/Data quip/Tooling perator flaterial etup ither rocess upplier raining napproved													·
				i			FAU	LT CATE	GORY				
. √Ľándir	B C C C C C C C C C	Bending Centre No Cracks Crushed/C Cuffs Heat Trea nspection Ripples in Torque W	ot Concer Crimped. t n Strip in Bend aves in E	Tube Extrusion	o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	773	Grain Hardwa Inspecti Instruct Mainte Mislabe Misreac Offset Out of 0	on Incomplete ions Incomplete/ nance iled Calibration	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss,	tolerance ct issing	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
Ì	_	urning Se				Finish			Sequence				

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

May 1, 2013 7:16:43 AM

Item ID:

D2012-113

Revision ID:

Item Name: Clamp

Required Date: 5/10/13

Start Date:

4/30/13

Start Qty: 5.00

Req'd Qty: 5.00

Accept

N900040100

Setup Start

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: Date: **Tooling:**

0.00

0.00

SPC (Y/N):

Sand & got

Run Hours

Date:

Date:

Run

Seriouse ID/

Oncretion

OC:

Work Center IL

Description

QC21- Final Inspection - Work Order Release

160

Quality Control

160

Memo

Tool W.

Transport Politics

Accept Qty Cual

				DQA:	Date:	
NCR:	Yes /	No	WORK ORDER NON-CONFORMANCE / UPDATE			

IVCIV.	C3 / 140				WORK ONDER NOW					QA Closed:	Date	
Work Orde	er:				DISPOSITION				AGAINST DEI	PARTMENT	م	
Part N	lo				Rework Scrap		ľ	Skid-tube Machining	Crosstube Small Fab		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	lo				Use-as-is Work Order Update] ''		noforming Large Fab	Finishing Composite	Rec/Stoi	Supplier	Other
Root				Descri	ption of work order update	Initi	al	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief	Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling		ļ						•				
Operator												
Material												
Setup		1										
Other												
Process												
Supplier						i						
Training												
Unapproved					and the second s							
		· · · · · · · · · · · · · · · · · · ·			F	AULT C	ATE	GORY				
Landin	ng Gear				General			•		1	_	
_	Bending				Bend	Gra				Ovalized	_	Pressure/Forced
	Centre N	ot Conce	ntric to (D/S	BOM/Route	⊢ —	rdwa			Over/Under	<u> </u>	Temperature/Cure
	Cracks				Broken/Damaged		-	on Incomplete		Part Incorre	<u> </u>	Weld
	Crushed/	Crimped.			Burrs	-		ions Incomplete/	'Unclear	Part Lost/M	- L.	Wrong Stock Pulled
	Cuffs				Contamination	ЩМã	ainte	nance	ļ	Part Movéd		
Ĺ	Heat Trea	at			Countersink	├ ──┤	slabe			Positioned \		
	Inspectio	n Strip in	Tube		Cut Too Short		sreac	i		Power Loss,	/Surge	Other
	Ripples ir	n Bend		<u> </u>	Drill Holes	\vdash	set					
	Torque V	Vaves in E	extrusion	` <u> </u>	Drawing	∐ Ou	t of C	Calibration				
	Turning S	equence			Finish	Ou	t of S	Sequence				

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

May 1, 2013 7:16:43 AM

Work Order ID:

100775

Parent Item:

D2012-113

Parent Item Name:

Clamp

Start Date: 4/30/13

Required Date: 5/10/13

Start Qty: 5.00

Required Qty: 5.00

Comments:

IPP: F01.10.05Fixed Typo and Added Inspection Level 21SM

IPP Rev:G Now on Waterjet 07-03-28 JLM

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date Status
Item Name	Item ID	Purch	Item	Location	Location	Seq ID	Measure	Hand		Qty	Issued	Issued
M304S16GA 304/316 Sheet .063		Purchased	No			110	sf	268.4214	0.015	_0 .078947 5 	,	JMB-09-25

Location	Loc Qty	Loc Code	
₹ (4)₹020	26 1.4213688		
• • •	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		And the second s
123150	140.8		<u> </u>
124428	29		
124572	98.45		

126915

126915

				DQA:	Date:
NCR: Ye	es / No	WORK ORDER NON-CONFORMANCE / UP	DATE		
			. 0	A Closed:	Date:

والمستنيات المستنيات والمستنيات والمستنيات والمستنيات والمستنا والمستنات والمستنات والمستنات والمستنات والمستن											QA CIOSCO.			
Work Orde	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS		
						Rework	7 		Skid-tube	Crosstube	7	Water Jet	Engineering	
Part N	lo.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
i uitti	•••					Use-as-is	1		noforming	Finishing	_	re/Packaging	Other	
NCR N	10.					Work Order Update	1		Large Fab	Composite		Supplier	 	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							-		.0					
Root					Descri	ption of work order update	In	itial	Ac	tion	Sign &			
Cause	Da	ite	Step	Qty	(or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector	
Doc/Data							1							
Equip/Tooling							-					1		
Operator								ï				,		
Material			l					ŀ						
Setup								ļ						
Other				<u> </u>	ĺ			į						
Process			١		l			j			·			
Supplier			!					ı		,				
Training		ļ			Į			1						
Unapproved														
						F	AULT	CATE	GORY					
Landi	ng Gear					General			·			_	_	
	Bend	ling				Bend		Grain		. [Ovalized		Pressure/Forced	
	Cent	re No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	r tolerance	Temperature/Cure	
	Crac	ks				Broken/Damaged		nspecti	ion Incomplete	. [Part Incorre	ect	Weld	
	Crus	hed/C	Crimped.			Burrs		nstruct	ions Incomplete/	′Unclear [Part Lost/M	lissing	Wrong Stock Pulled	
	Cuffs	5				Contamination		Mainte	enance		Part Moved	1		
	Heat	Treat	t			Countersink		Mislabe	·led	[Positioned '	Wrong		
	Inspe	ection	Strip in	Tube		Cut Too Short		Misread	i	. [Power Loss,	/Surge	Other	
	Ripp	les in	Bend			Drill Holes '		Offset		-				
	Torq	ue Wa	aves in E	xtrusio	n	Drawing	П	Out of (Calibration					
	⊢ – '		equence			Finish	П	Out of S	Sequence					
			ist in Tub			Folio		Outside	Dimensions					

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	1000 75
Description: Clamp	Part Number:	D2012-113
Inspection Dwg: D2012-113 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

		X First A	rticle [Prot	otype
Drawing	Tolerance	Actual	Accept	Reiect	Method

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.75	+/-0.030	0.754"	_		V	Jamo,
0.40	+/-0.030	0.405	_		U	
1.360	+/-0.010	1.364	_		V	,
0.800	+/-0.010	0.802	-		V	
Ø0.257	+0.006/-0.001	0.259	_		v	
Ø0.191	+0.005/-0.001	0.193"	_		V	
2.96	+/-0.030	2.967			1	
0.063	+/-0.010	0.058			1	,
						11-100-11-1-1-1-1
· · · · · ·					,	
	1					
		-				

Measured by:	Audited by:	Prototype Approval:	N/A
Date: 13-0925	Date: 13-0-01	Date:	N/A

Rev	Date	Change	Revised by	Approyed
Α	07.05.08	New Issue	KJ/JLM	411

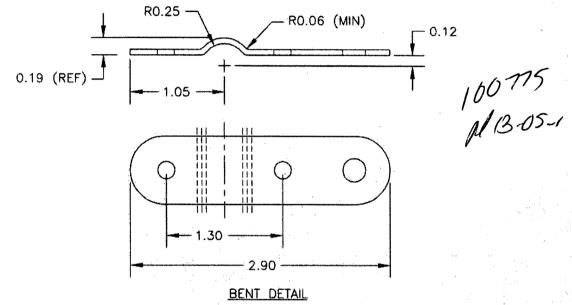


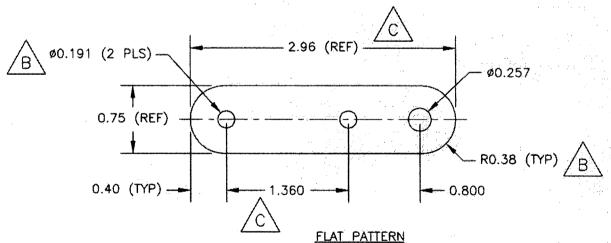


DESIGN JB	DRAWN BY	DART AEROSPACE HAWKESBURY, ONTARIO, CANA	
CHECKED	APPROVED APPROVED	DRAWING NO. D2012-113	REV. C SHEET 1 OF 1
DATE		TITLE	SCALE
00.04.28		CLAMP	1:1
Α	92.06.03	REDRAWN FROM D2012	



	00.04.28		CLAMP	
,	Α	92.06.03	REDRAWN FROM D2012	_
	В	00.02.23	REDRAWN; RO.38 WAS RO.50; ØO.191 WAS ØO.189; ADDED FLAT PATTERN	
	С	00.04.28	2.96 WAS 3.35; 1.360 WAS 1.745	





MATERIAL: AISI 304/316 SS, 0.063 THICK TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES

Copyright © 1992 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED.

OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.